

Voltage Transducer DCVT 1000/SP1

$$V_{PN} = 1000 \text{ V}$$

For the electronic measurement of DC voltages with a galvanic isolation between the primary circuit (high voltage) and the secondary circuit (electronic circuit).



Preliminary

All Data are given with a $R_L = 10 \text{ k}\Omega$

Electrical data

V_{PN}	Primary nominal voltage	1000	V DC
V_{Pmax}	Primary voltage measuring range	56 .. 1400	V DC
V_{P}	Not measurable overload	3000 (1s/h)	V _{DC}
R_p	Primary input resistance	appr. 97.5	M Ω
R_L	Load impedance	10	k Ω
V_{OUT}	Output voltage ¹⁾	$V_{OUT} = a \times V_P - b$ $a = 0.01 \pm 0.5 \%$ $b = 0.3 \pm 0.1$	V
I_C	Current consumption	appr. 1	mA/kV
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 min	5.5	kV
V_e	R.m.s. voltage for partial discharge extinction @ 10pC	2.2	kV

Accuracy-Dynamic performance data

X_G	Overall Accuracy @ V_{PN} , $T_A = +25^\circ\text{C}$	± 1.5	%
X_G	Overall Accuracy @ V_{PN} , $T_A = -15 \dots +70^\circ\text{C}$	± 3.5	%
e_L	Linearity @ $T_A = 25^\circ\text{C}$	$< \pm 0.5$	%
t_r	Response time @ 10% of V_{PN}	< 100	μs

General data

T_A	Ambient operating temperature	-15 .. +70	$^\circ\text{C}$
T_S	Ambient storage temperature	-25 .. +85	$^\circ\text{C}$
dCp	Creepage distance	> 10	mm
dCl	Clearance distance	none	
CTI	Comparative tracking index (Group)	600	V
	UL94 classification	V0	
	Potting material	Polyurethane resin, UL94 V0	
m	Mass	appr. 400	g

Features

- Self-Powered
- Insulated plastic case recognized according to UL 94-V0
- Included primary resistor

Advantages

- Low power consumption
- Very good linearity
- Low thermal drift
- High immunity to external interference
- Low disturbance in common mode

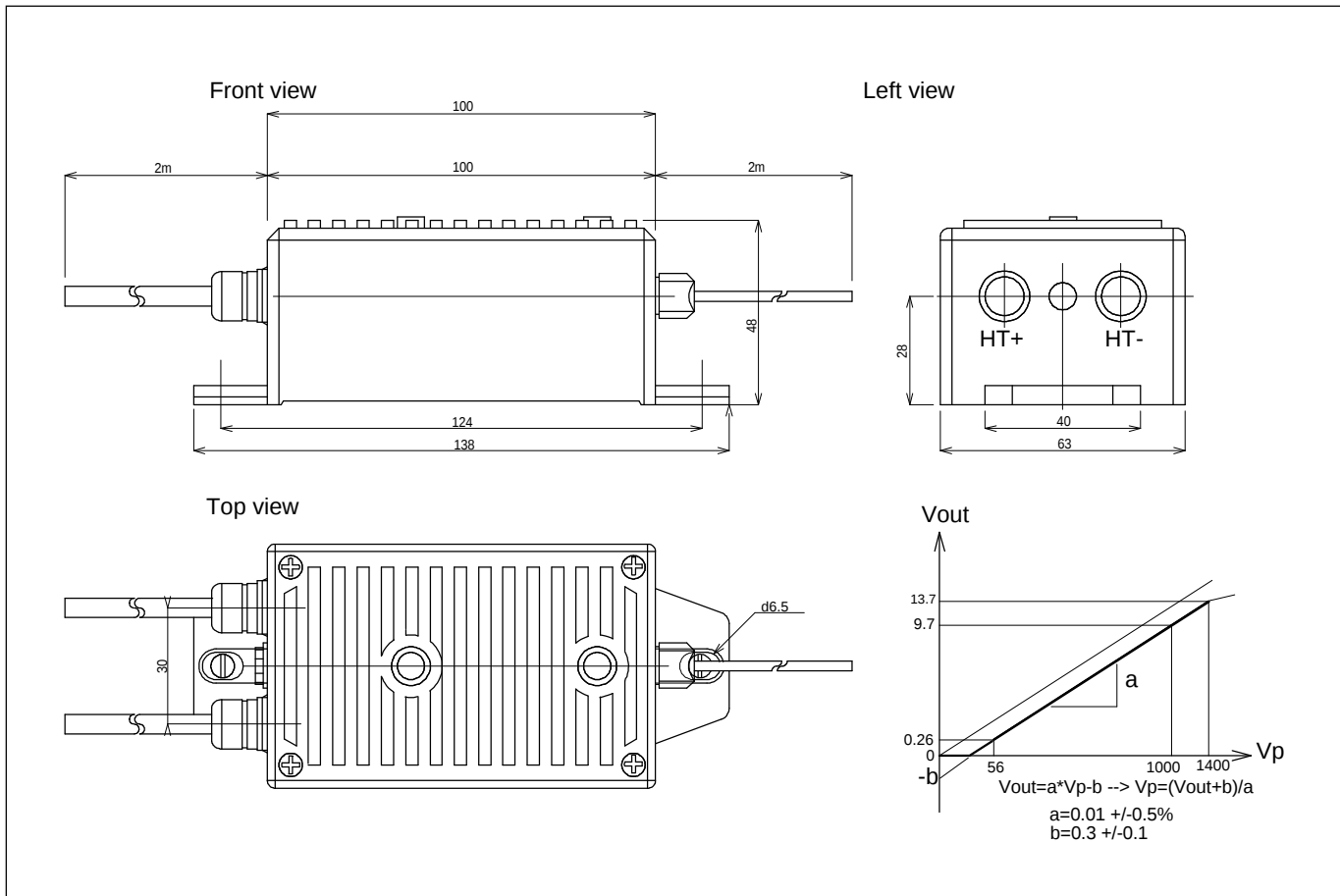
Applications

- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- DC voltage monitoring

This is customer specific model.
Utilization restricted to agreed specifications.

Notes : ¹⁾ See graphical presentation of transfer function overleaf.

Dimensions DCVT 1000/SP1 (in mm. 1mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 1 mm
- Transducer fastening
2 holes $\varnothing 6.5$ mm
Distance between holes 124 mm
- Connection
Primary 2m halogen free 1 x 1.5 mm² cable
Secondary 2m halogen free 2 x 0.5 mm² + EMC screen
- Recommended fastening torque 2.2 Nm or 1.62 Lb-Ft.

Remark

- I_s is positive when V_p is applied on terminal +HT.